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09/777,333	02/06/2001	Tomonori Gotoh	FUJM 18.291	2904

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EXAMINER
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NGUYEN, ALAN V

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/777,333

Applicant(s)

GOTOH ET AL.

Examiner

Alan Nguyen

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, and 9 is/are rejected.
- 7) ☒ Claim(s) 4 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:

On pages 2 and 4, references to elements 12#1, 12#2, and 12#i were not consistent with the elements in figure 27.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Baydar et al (US 5,784,377) hereafter Baydar.

Regarding **claim 1** Baydar discloses an intensive management apparatus for managing a time-sharing multiplexing network including **(A SONET system that utilizes section, line, and path monitoring)**:

Baydar discloses a plurality of terminals **(figure 7, element 29 shows a plurality of terminals used in the embodiment)**;

Baydar discloses a plurality of communication apparatuses **(common equipment shelf, element 26; the common equipment shelf is an apparatus containing a number of channel shelves 28 the interfaces with the subscriber**

units and also interfaces with the OC-x signals; col 56 lines 60-67 and col 57 lines 1-25 and 60-67) each for communicating transmitted data accommodated in each of time slots by mapping the transmitted data onto the time slots allocated to a transmission line and allocated in the communication apparatus for transmitting the transmitted data on the basis of line-setting information **(The system utilizes time slot multiplexing for signal grooming. It provides a time slot interchange capability to convert line terminations to the appropriate time slot. The transmitted data is mapped onto the allocated time slots); and**

Baydar discloses a plurality of transmission lines connecting the communication apparatuses to each other **(figure 7 shows OC-3 signals leaving common equipment shelf 26. It is understood that the signals are connected to other equipment shelves in the network)**, the intensive management apparatus comprising:

Baydar discloses a path-information-creating unit for creating path information including a group identifier, termination information of terminating connection points **(common equipment shelf 26 comprises an OC-3 card 50 that performs section, line, and path termination functions which include performance and path monitoring. The path termination is the connection between subscriber terminals, and contains all intermediary connections, including line and section connections. The path termination is considered the group identifier. Path overhead contains information indicative of identification; for example see col 14 lines 45-57, col 17 lines 15-27, and col 18 lines 1-29)**, a path management number assigned to a path connecting the terminating connection points at which the time slots

in the communication apparatus are allocated and an allocated-time-slot number **(The line termination is the connections between the subscriber terminal to the multiplexing/cross-connect unit and the connection between the cross-connect units. Line overhead contains information indicative of identification, since line termination occurs at the OC-3 card 50. A time slot identity must be inherent to manage the line terminations; see col 17 lines 10-27 and col 18 lines 1-17);**

Baydar discloses a time-slot-allocating unit for creating time-slot-allocation information describing allocation of the time slots to a path identified by the path management number included in the time-slot-allocation information at each of the terminating connection points **(Time slot assignment of each channel is done by Time slot assigner 147, and allocates times slots with each termination, including line and path. Since line termination considered the path management number, allocation of time slots is done according to the information in the line termination; see col 31 lines 47-67 and col 32 lines 1-34);**

Baydar discloses a path-information-checking unit for forming a judgment on validity of each of a plurality of paths identified by the same value of the group identifier assigned to a path-information group comprising pieces of path information describing the paths on the basis of the path information **(OC-3 card 50 controls the line monitoring for errors and determines if the errors are considered significant; col 18 lines 1-27);** and

Baydar discloses a result display unit for displaying results of the judgment on validity of the paths **(The results from the OC-3 card 50 are used to display alarms**

**due to line and path errors in the alarm card; see col 33 lines 39-67 and col 34 lines 1-19).**

Regarding **claims 2 and 3** Baydar discloses where the path-information-checking unit forms a judgment as to whether or not a time slot is shared by another path pertaining to the path-information group at each of the terminating connection points described in the pieces of path information composing the path-information group on the basis of the time-slot-allocation information, and whether or not a allocated-time-slot number described in specific path information is equal to the allocated-time-slot number described in each of a plurality of other pieces of path information each including the same group identifier as the group identifier included in the specific path information on the basis of the time-slot-allocation information **(TR-TSY-303, a document**

**incorporated into the reference, requires time slot interchange and assignment**

**The present system allows interchange and assignment to any of the available 672 channels in an STS-1. This allows grooming from any channel. Grooming is defined as reorganizing subscriber traffic in different data paths/time slots. Since the time slots are allocated and managed for data transmission efficiency, the system must know whether or not a time slot is shared by another path; see col 10 lines 65-67 and col 11 lines 1-17).**

Regarding **claims 5 and 6** Baydar discloses where the termination information includes a connection type indicating an interface type of each of the terminating connection

points; and the path-information-checking unit forms a judgment as to whether or not 2 or more terminating connection points each having a terminal interface type are described in pieces of termination information included in any pieces of path information composing a path-information group where the terminal interface type is the interface type of the terminals, and forms a judgment as to whether or not the terminal interface type of one of the terminating connection points is compatible with the terminal interface type **(The common equipment shelf 26 interfaces with both the network through optical connections and interfaces with the subscriber terminal through a variety of connections. It has interfaces for T1, T3, STS-1, and OC-3 connections to POTS, ISDN, and special services such as pay phones and DDS data ports. Therefore the common equipment shelf 26 must have knowledge to determine if the connection point is compatible with the terminal interface type; see col 8 lines 15-50).**

Regarding **claim 7** Baydar discloses where if a path-information group includes pieces of path information describing 2 or more terminating connection points each having the connection type indicating the terminal interface type, the path-information-checking unit forms a judgment as to whether or not it is possible to connect a path connected to one of the terminating connection points having the connection type indicating the terminal interface type to a path connected to any other of the terminating connection points having the connection type indicating the terminal interface type by sequential connection of adjacent paths sharing common terminating connection points and

pertaining to the path-information group **(The common equipment shelf 26 interfaces with both the network through optical connections and interfaces with the subscriber terminal through a variety of connections. It has interfaces for T1, T3, STS-1, and OC-3 connections to POTS, ISDN, and special services such as pay phones and DDS data ports. Therefore the common equipment shelf 26 must have knowledge to determine if the connection point is compatible with the terminal interface type and with other connection points through the network; see col 8 lines 15-50 and col 9 lines 1-30).**

Regarding **claim 9** Baydar discloses where the path-information-checking unit forms a judgment as to whether or not any of the time slots allocated at each of the terminating connection points is shared by paths identified by different group identifiers on the basis of the time-slot-allocation information **(TR-TSY-303, a document incorporated into the reference, requires time slot interchange and assignment** The present system allows interchange and assignment to any of the available 672 channels in an STS-1. This allows grooming from any channel. Grooming is defined as reorganizing subscriber traffic in different data paths/time slots. Since the time slots are allocated and managed for data transmission efficiency, the system must know whether or not a time slot is shared by another path; see col 10 lines 65-67 and col 11 lines 1-17).



***Allowable Subject Matter***

4. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding **claim 4** the cited references taken individually or in combination fails to particularly disclose where the combination of an intensive management apparatus according to claim 2 where the path information includes a line-implementation identifier showing a direction of data transmitted through a path between the terminating connection points described in the path information; the time-slot-allocation information is created for each of 2 directions of transmitted data at each of the terminating connection points; and the path-information-checking unit forms a judgment as to whether or not a time slot is shared by a plurality of paths pertaining to a path-information group on the basis of pieces of time-slot-allocation information created for the same direction at a terminating connection point common to pieces of path information composing the path-information group.

Regarding **claim 8** the cited references taken individually or in combination fails to particularly disclose where the combination of an intensive management apparatus according to claim 7 where each path information includes a line-implementation identifier showing a direction of data transmitted through a path between the terminating connection points described in the path information; and the path-information-checking unit carries out: first processing to identify a path connected to a terminating connection point having the connection type indicating the terminal interface type as a path

connected to a transmission-side terminal and a path connected to a terminating connection point having the connection type indicating the terminal interface type as a path connected to a reception-side terminal on the basis of the line-implementation identifier; second processing to set a terminating connection point existing on the path connected to the transmission-side terminal and having a connection type other than the terminal interface type as another terminating connection point; third processing to repeat: first sub-processing to select a next path sharing the other terminating connection point as a terminating connection point on a transmission side of the next path; and second sub-processing to set a terminating connection point located on the next path and different from the other terminating connection point as a terminating connection point to be used in next first sub-processing as a substitute for the other terminating connection point, and fourth processing to form a judgment as to whether or not it is possible to connect the path connected to the transmission-side terminal to the path connected to the reception-side terminal.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to path management in time multiplexed systems:

US Patent (6,298,043) to Mauger et al

US Patent (5,815,490) to Lu

US Patent (5,416,768) to Jahromi

US Patent (6,487,216) to Thompson et al

US Patent (5,459,720) to Iliev et al


US Patent (6,760,339) to Noel et al

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 703-305-0369. The examiner can normally be reached on 9am-6pm ET, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVN  
February 13, 2004

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**